OBSERVATIONS

ON

SOME PAPERS

In that very uſeful Collection, intitled,

MUSEUM RUSTICUM.

By a GENTLEMAN.

TO BE CONTINUED OCCASIONALLY.

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WITH

New Theoretical and Practical PIECES

ON

HUSBANDRY.

Hæc ſtudia adoleſcentiam alunt, ſenectutem oblectant, ſecundas res ornant; adverſis perfugium et ſolatium præbent; delectant domi; non impediunt foris; pernoctant nobiſcum, peregrinantur, ruſticantur. CICERO.

LONDON:
Printed for W. SANDBY, in Fleet-ſtreet.
MDCCLXVI.
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HUSBANDRY.

Hæc studia adolescentiam alunt, senectutem oblectant, secundas res ornant; adversis perfugium et solatium præbent; delectant domi; non impediunt foris; pernoctant nobiscum, peregrinantur, rusticantur. CICERO.

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BRITISH MUSEUM

43

OBSERVATIONS
ON
SOME PAPERS
IN
That very uſeful COLLECTION, intitled, MUSEUM RUSTICUM.

THE author of theſe obſervations humbly begs leave to lay them before the public; not with a deſign to cenſure that uſeful and pleaſing collection which hath lately appeared; but to *promote* its *utility*.

He intends not only to make ſome few remarks on ſeveral papers there, occaſionally; but alſo to add, as he hopes, many uſeful diſcoveries of his own——the reſult of ſeveral years practice and experience in agriculture.

As improvements in huſbandry, eſpecially in remote parts, muſt take their riſe

15

from *gentlemen* (*a*) of ſpirit and education; he hopes he ſhall be excuſed for inſerting a few quotations, which may poſſibly be agreeable to gentlemen of a claſſical taſte.

Nothing can fill the mind with greater pleaſure on the ſubject of agriculture than claſſic (*b*) repreſentations of rural life; as they approach neareſt to the pleaſing deſcription we have of the golden-age; that is, of the moſt innocent æra of man's life. There are no branches of poetry more juſtly admired than thoſe which relate to rural ſcenes. I need not inſtance here the various pieces of paſtoral poetry, which are to be found in claſſical authors. The Georgics of Virgil alone are a ſufficient illuſtration.——He, however, with *all* the profane writers, are infinitely exceeded by that beautiful ſimplicity, thoſe

(*a*) Pliny obſerves the earth brought forth more abundantly — cum imperatorum clariſſimorum tractaretur.

(*b*) Theſe put us in mind of our forme rinnocence and ſimplicity — our ſchool, or golden age; when Heſiod, Theocritus and Virgil afforded us, (at leaſt we *now* think ſo) happier moments, than we can at this time find, in the practical part of farming.

exquiſite deſcriptions, and alluſions to rural affairs, which are contained in the holy ſcriptures. (*c*) The innocency and happineſs of Adam and Eve, (*d*) give that excellent ſublimity to Milton, which diſtinguiſhes him above all pagan authors.

As theſe quotations are marginal, the reader, if he chuſes, may paſs them over without any interruption to the ſubject in hand. They may pleaſe a few — they can give offence to none.

There are, in my humble opinion, *ſome* papers in the Muſeum Ruſticum capable of improvement—*Some* which may lead the young farmer into inconveniences.

(*c*) Adam and Eve in Paradiſe.——The lives of the patriarchs; eſpecially Jacob's, during his ſtay with Laban, tho' greatly eclipſed with the ill-uſage of his father-in-law. Had the ſacred hiſtorian given us the endearments, the rural minutiæ which paſſed between the patriarch and his beloved Rachel, they would have afforded us the moſt pleaſing paſtoral ſcenes ever exhibited to the world.

(*d*) On to their morning's rural work they haſte,
Among ſweet dews and flowers, &c. &c.
MILTON.

I hope the authors will pardon me, if I preſume to point out what ſeems to *me* exceptionable therein. There is no human compoſition free from error. Here I muſt beg the reader will not be ſevere on every inaccuracy, but will pleaſe to conſider I ſtand alone, without the aſſiſtance of one ſingle paper of agriculture.

I am ſo well pleaſed with the Muſeum Ruſticum in general, that I earneſtly recommend it to the farmer (*e*). I am ſure it will be his own fault, if he does not improve in the reading, being one of the moſt uſeful treatiſes on that ſubject. Increaſe of produce in agriculture, is the work of God, in the hands of man; and becomes a kind of human creation. The various form of generation, from the ſingle ſeed, to that bread, which is the ſtaff of life, is truly amazing.

If the huſbandman has any thought about him, he cannot forget that leſſon, which his profeſſion ſo frequently points

(*e*) By the word *farmer* is implied every occupier of land.

out to him—that death is a neceſſary ſtep to life.——Every furrow preaches, in ſilent eloquence, his own reſurrection. If the infidel, who is wiſer, (at leaſt in his own eyes) than the reſt of mankind, cannot account for this viſible and familiar phænomenon in nature; how can he expect, that the perſon whom he deems ſo inferior in underſtanding, ſhould be able fully to comprehend the unrevealed attributes of *his divinity*, who is the author of nature herſelf.

The moſt ſimple of the ſons of men may, and ought to know, that the goodneſs of providence never feeds him with a bit of bread, but at the inconceivable expence of what may fairly be called a train of miracles. As the operations of nature, however common, are utterly unaccountable.

This, therefore, is the firſt obſervation and improvement we ought to make; may it be the reader's too. May every farmer remember him who gives the former and the latter rain. And may his weeks of harveſt be ſo appointed as to fill his ſoul

with gratitude, as well as his barns with plenty. When his valleys ſtand ſo thick with corn, ſurely he, as well as they, ſhould rejoice, and ſing praiſes to that Being, who fills all things living (with ſuch wonderful plenteouſneſs.

This is the duty, this ought to be the filial piety of all the ſons of earth. This will be the ſureſt means to thrive; this will fill the garners with all manner of ſtore; ſtrengthen the laborious ox; and add ſuch fæcundity to the fold, as to bring forth its thouſands (*g*).

I need not add here, what almoſt every writer on the ſubject has done already—an encomium on huſbandry (*h*).

It is one of the moſt rational, deſirable and uſeful profeſſions, that the affairs of *this world*, can employ the faculties of man.

One

(*g*) Mille meæ ſiculis errant in montibus agnæ.

(*h*) Beatus ille qui procul negotiis,
Ut priſca gens mortalium,
Paterna rura bobus exercet ſuis,
Solutus omni fænore.

Like

One great difficulty which is uſually complained of in farming, is the unfaithfulneſs of ſervants. Men would do well to conſider whence this ariſes.——The want of pious and grateful conduct and reflection in the maſter, is, I am afraid, the great cauſe.——The only way effectually to cure this evil, is to inculcate by precept and example, principles of ſound religion, which will teach them faithfulneſs and honeſty, for conſcience ſake. We complain of ſupineneſs and diſhoneſty in our ſervants.——Can it be expected, that ſervant will be juſt and active in his maſter's buſineſs, who is indifferent as to his *own* (eternal) intereſt? It is owing to a want of religious principles in families that a man's greateſt enemy, ſhall

Like the firſt mortals, bleſt is he,
From debts, and mortgages, and buſineſs free;
With his own Hands, who plows the ſoil,
Which grateful once confeſs'd his father's toil.

FRAN. HORACE.

Primis ſeculis felicis et aurei mortales in agnis degebant; terram exercebant, innocentem et beatam agebant vitam.

Vide PLIN. VIRGIL, &c.

be that of his own houſe. There is ſuch levity and irreligion in the *higher*, and ſuch profaneneſs in the *lower* claſs of men, which threaten total ruin and confuſion. Idleneſs and impiety muſt make the moſt fruitful land barren.

Theſe few following cautions, may be alſo of ſervice, to the young, eſpecially the gentleman farmer.

Try experiments—(*l*) try them in miniature: if they fail, the loſs will be trifling. You ſhould not endeavor to deceive yourſelf, nor impoſe on another, by enhancing the profits, and concealing the expence. This is too often the caſe.—— We are entertained with experiments, and the great profits ariſing therefrom, ſpecified in every article; but it is certain we have not the account of the expence, on the other ſide, fairly ſtated; this leads to

(*l*) Etenim experimentorum longe major eſt ſubtilitas, quam ſenſus ipſius—itaque eo rem deducimus, ut ſenſus tantum de experimento, experimentum de re judicet.

Fr. de Verul. Inſtaur. magn.

fatal

fatal errors. This has been too often the caſe with moſt writers on agriculture.

On the other hand, many valuable attempts in huſbandry, have been ſet aſide, as unprofitable, or impracticable; owing to the gentleman farmer's truſting too far, the execution to his bailif or head ſervant. Who being unwilling, or often unable to try new experiments, goes on in a very unfair and improper manner; the whole miſcarries, and is intirely laid aſide. Be accurate in all. —— Note the time, the weather, &c. in a book, leave ſome pages to inſert the conſequences as they happen.

Remember there is no farming without manure, whatever may be ſaid to the contrary: nor to any purpoſe without frequent plowing.

A rich clod unbroken, can produce *no* crop; a ſteril, pulveriſed (*m*) earth, a *poor* one.

(*m*) A ſtiff clay requires frequent plowings, to divide it——a light ſoil may be plowed too often. I ſpeak from experience. In this I muſt beg leave to diſſent from the very ingenious Mr. Tull, whoſe memory I revere.

Keep all ſoils clear of weeds.

Never plow in wet weather, if you can avoid it,

If you have a much greater proportion of arable, than paſture and meadow, ſow every year artificial graſſes.——Be well acquainted with the quality of Burnet, Timothy, and foreign (*n*) graſſes lately recommended, before you venture on them at large. I have reaſons to think, there are no artificial paſtures yet found out equal to clover, trefoil and reygraſs, mixed ——they afford a great and good crop, either for hay or paſture, with the leaſt expence.———The ſmall white (commonly called Dutch) (*o*) clover, with the trefoil, grows thick at bottom; and the broad clover and reygraſs form a higher

(*n*) Parce peregrinos cultus tantare, novaſque
Explorare vias.———*Præd. ruſt. Van.*

(*o*) This ſweet graſs grows (ſponte ſua) in this kingdom, and we need not, if we pleaſe, ſend to the Dutch for it. It will appear on paſtures manured with coal aſhes, where none of it was ſeen before: probably the dividing of the ſoil by the warmth and action of the aſhes may give the dormant ſeed air ſufficient to vegetate.

growth

growth above. The firſt year mow or graze them:——the ſecond year, graze only, and the third ſpring, graze till about midſummer; then manure on the ſwerd, with dung and lime, if to be had; both together are (p) beſt; plow them in; order afterwards as a fallow for wheat. I prefer doing this the third year, to the ſecond; becauſe the ſecond winter and third ſpring afford a very healthy paſture for ſheep, and a preparation for the beſt wheat crop, by manure and ſufficient tillage.

(p) Lime and dung together cauſe a greater fermentation, conſequently aſſiſt to divide the ſoil—the lime abſorbs the acidity in the dung and earth, and fixes the volatile ſalts and ſpirits of both.

Many writers explode the uſe of lime, ſaying it has nothing in it which can promote vegetation, as no ſeed will grow in quick or effete lime. It may be ſo.——Theſe ſubtle reaſonings ſignify little, while repeated experience convinces the farmer, that lime helps, very plainly, to produce the largeſt crops; let the modus operandi puzzle the philoſopher, while the induſtrious huſbandman reaps the benefit. If lime fails (as it often does) it is owing to the want of knowledge and experience in the farmer.

Watch,

Watch, that is, be ready for the ſeaſons; (q) don't begin to plow and prepare your ground, when you ſhould be ſowing; the criſis of a whole ſeaſon may depend on one day; particularly in wet ſoils.

Have all neceſſary implements of your own; never borrow, if poſſibly you can help it. You loſe time; and if any accident happens to that you borrow, you may find inſuperable difficulties.—Make your ſervant bring every implement to its proper place; it will be eaſier found when wanting, and leſs liable to be loſt.

Keep ſeaſoned timber always ready for carts, plows, &c. with tools and nails of all ſorts. A nail in time, like the houſewife's needle, may ſave many.

You ſhould not be without common medicines, oil, ſtiptics, and ſuch as require immediate adminiſtring, or you may loſe man or beaſt before aſſiſtance can be had from the diſtant town.

It will be a pleaſure, and alſo of uſe, to the (gentleman) farmer, if he under-

(q) Tempora quæ meſſor, quæ curvus arator haberent.

ſtands

ſtands ſomething of mechaniſm——the power and the manual part. Alſo drawing. By theſe he may improve old, invent and make new, implements, at no great expence. Implements of huſbandry brought a great way off, are too expenſive for many farmers. When made at home, they are not very dear. The theory will be a pleaſing ſtudy, and the practice, an uſeful and healthy recreation. The exerciſe of hewing, plaining, &c. will open the cheſt, and contribute greatly to the health and vigor of the animal machine.

The theory and light of ſcience aſſiſt an enterprizing genius, &c. How difficult, nay impracticable a thing it is to attempt the contrivance and execution of any extenſive deſign, without a reaſonable degree of *theoretical* as well as *practical* knowledge.

Never wring the neceſſitous, in giving them leſs than the value; nor ſell to ſuch at an advanced price. It is a jewiſh diſpoſition to watch the neceſſities of a fellow-creature, and take their ſtock at half the value; becauſe they *muſt* fell at any rate,

rate, to ſoften a hard-preſſing creditor, or a much harder petty-fogger.

This will never thrive (*r*).—There is an execrable practice, which is too prevalent; namely, that of ſelling corn to your poor labourers at home of the worſe ſort, and at a greater price, than you have for the beſt, after the expence and trouble of carrying it many miles to market.

Prefer the ſolid pleaſures of your farm to the vanities of the town. There you throw away more money fooliſhly, if not wickedly, on worthleſs objects, than might employ many honeſt poor people at home in the improvement of your eſtate. Keep a regular account, and it will probably keep you out of debt.

Never ſuffer your ſervants and workmen to impoſe on you; it encourages diſhoneſty in *them*, and brings innumerable inconveniences upon *you*. When they find you are not to be cheated, they will give over the attempt.

(*r*) Obſtat Virtutibus Auri.
Sacra fames.———

Diſcourage

Diſcourage idleneſs; reward induſtry; relieve the *really* diſtreſſed; rob not the poor in giving their due to the idle and ſturdy beggar. It is the utmoſt reproach to ſociety, that there ſhould be a poor man un-relieved, or a poor rogue un-puniſhed.

Oeconomy and generoſity united, are as neceſſary virtues in a country-gentleman in the management of his eſtate; as faith and works coinciding, are to the chriſtian's ſalvation. Let no one think the firſt quite foreign to the purpoſe of huſbandry; without proper œconomy no fortune can hold it for any time; without *proper* generoſity, by which I mean juſtice, at leaſt, in all its branches, the greateſt affluence cannot ſtand alone: ten thouſand pounds in the purſe, cannot till your ground or reap your corn; the aſſiſtance of the pooreſt, if induſtrious, wretch, is as neceſſary as money; let him not ſuffer for want of proper care, even in ſickneſs, for if this one member ſuffers, you as another member alſo ſuffer. This may be looked upon as a digreſſion,

by the inconſiderate; but will be deemed otherwiſe by the man of true ſentiment. Give the able (*r*) proper labour; the ſick (*s*) proper aſſiſtance.

Do not employ your ſervants on buſineſs, except in caſes of neceſſity, on the Lord's day——it is too frequent, and an horrible cuſtom; it teaches them habitually to break the ſabbath, and it is beſides unjuſt, as they have a right to reſt on the Lord's day.

Oblige your domeſticks to be at home in the night time; it is a matter of the utmoſt conſequence;—put them to eaſy and uſeful employments in the evening at the (*t*) kitchen fire, ſuch as preparing traps for vermin, yokes, rakes, ſpars, &c. After ſupper (*u*) let each have a ſober but chearful

(*r*) ——Sanos exerceat, ægros

(*s*) Solicite foveat, ſervos.——

(*t*) Agricolas juvat imprimis ſpacioſa culina,
Qua collecta domus, largo brumalia ligno
Frigora diſolvat.——

(*u*) Poſt epulas hinc inde ſedent et grandis arator,
Horridus et cuſtos caprarum; oviumque majiſter,
Atque

ful cup as an encouragement, while the jocund tale (*w*) hangs round the liſtening circle.

Riſe early——eat a cruſt of bread, and drink a glaſs of mead or raiſin wine before you go into the air for any time. This will be of great ſervice, in low damp ſituations particularly; mead is an antiſeptic. In fens and marſhes the inhabitants are peculiarly ſubject to agues and intermitting fevers.—Here they commonly uſe ſpiritous liquors too freely; they are very prejudicial, even here; for when drank alone and frequently, under the falſe notion of warming the body, reſiſting colds, (*x*) agues, &c. they thicken the fluids, contract

Atque lacertoſus Foſſor, duruſque bubulcus.
——————Vimine Cento.
Conficiunt calathos.——*Præd. Ruſt. Van.*

(*w*) Atque jocos vecors non ſentiat inter acerbos,
Illudat nigro quod theſtylis improba ſucco,
Et faciem conſcribat.——————
With ſtories told of many a feat;
How Fairy Mab the junkets eat, &c.
MILTON's *Allegro.*

(*x*) Agues have been more riſe the laſt, and part of this year, than I ever remember——and what is

contract the veſſels, and by degrees reduce them to a cold, relaxed and languid ſtate; and thus accelerate the approach of death.——If they muſt be drank let them be well diluted with water.

I now proceed to my obſervations, and firſt,

Of HOPS.

[*See Muſeum Ruſticum, No.* 1, *Vol.* 1.]

If we conſider the general uſe of hops, we might expect to find the culture and management of them to be well underſtood and practiſed.

This is not the caſe.—Few counties in England, not one in Wales, underſtand much of the matter. In Wales

very ſtrange, in the drieſt and ſeemingly moſt healthy ſituations:—theſe agues end in the jaundice, and threaten dropſies. I gave away a compoſition of vegetable powders to near two hundred poor people; it hardly ever failed of ſucceſs; and I think it not only as ſure, but much more ſafe than the bark in theſe agues: the gentlemen of the faculty will evidently ſee the reaſon, why the bark may be improper on *theſe* occaſions.

they

they make very little cyder; live almoſt altogether on malt liquor;—the growth of hops muſt be greatly their intereſt. They uſe great quantities, which are brought to them at the additional expence of long carriage, conſequently at an advanced price;—and what is worſe, are, generally, very bad. The ſoil of this principality, in many counties, is not a whit inferior to the beſt in England. Poles of one kind or other may be raiſed almoſt on every farm. They have diverſities of manure in great plenty.—The beſt material for drying, perhaps in the world——a foſſil, called ſtone-coal from its ſolidity; burns clear, without ſmoke, and produces an even heat. They cannot ſay, with any truth, they want any thing towards cultivating this uſeful produce, except the will to ſet about it. If any in this principality ſhould be deſirous (as many I hope will) to grow hops, it is to be wiſhed ſome diſintereſted planter would be kind enough to publiſh the beſt method now in uſe. Till this be done, this ſhort and eaſy one, may ſuffice

to

to direct the young farmer. And this will lead me to interſperſe ſome obſervations, which may be of uſe to thoſe who have been planters all their life-time.

SITUATION.

The beſt ſituation for them is that which faces the ſouth, ſouth eaſt, or ſouth weſt, provided it is not expoſed to hurricanes, as is often the misfortune in maritime counties; eſpecially in the weſtern parts of this kingdom. Theſe ſtorms blow down the poles, and ſcatter the ſeed when ripe. In low, damp, pent-up valleys, tho' there the ſoil may be beſt, the more precarious the crop——for want of free circulating air.

The quantity of moiſture imbibed and perſpired, in a healthy ſtate, will be very conſiderable, near "two hundred and twenty gallons (*y*) in twelve hours to each acre."——Where the ſituation is low and wet, the ſtagnation of air will prevent the free perſpiration of the hop-

(*y*) See HALES. Veg. Stat. page 32.

vines,

vines, and this muſt occaſion what is called the fen or mold. Suppoſe the planter in ſuch a ſituation (and perhaps in every other) would try what avenues twenty feet wide, and croſſing each other, in large plantations, might effect.

Perhaps making fires round the plantation with clean ſtraw, dry fern, &c. might anſwer. This would rarify the heavy, ſtagnated air, and conſequently make it lighter for the circumambient air to carry off. The ſmoke might alſo ſuffocate the animalcula lodged on the plants.

The SOIL

Should be deep—If ſtrong, old land and dry, it will require only proper digging, the graſſy part downwards, and two feet deep, the upper earth made fine, and free from ſtones and roots. If wet (even a bog may do) it ſhould be well drained, by making a deep ditch quite round. In ſuch a ſituation I would recommend ſluices to the ditches, by which means the water may be dammed occaſionally, and

communicate refreſhment to the plantation.

On the banks, on the outſide, may be planted alder, willow, poplar for poles. Yet, if you can conveniently grow poles in ſome other part of the farm, it will be better; becauſe trees are often prejudicial when too near hops, as they attract moiſture, and obſtruct a free air, and thus the hops become more replete with humidity.

The earth dug out of your ditches, round the plantation, may be mixed and often turned with dung, lime, &c. and make a very good compoſt for manure.

PLANTING.

In March ſtretch a line, the length of the ground, marked at every nine (z)

(z) The uſual way is to plant at four or five feet diſtance, which is manifeſtly wrong; and I have reaſons to think many plantations ſeldom bear a crop, owing to this, tho' often attributed to other cauſes. When the intervals are ſo wide you may uſe the plow inſtead of the expenſive method of digging, and plant cabbage, peaſe, beans, &c. between, without any prejudice to the hops.

feet,

feet, with a white feather, where a hole is to be dug about two feet diameter, and as deep; fill them with good earth, or compoſt of earth, dung, lime, &c. mixed and often turned; plant in each four ſets of hops, their tops even with the ground: plant the next row by the ſame line, in the ſame manner, at nine feet diſtance from the firſt; and ſo on in parallel lines through the whole plantation, each row, and each hill, ſtanding nine feet a-part.

Nothing more will be required this ſummer than to keep the ground clear of weeds, by digging or plowing; ſome twiſt the vines the firſt year, as they are not to be poled, into knots, but ſticking ſmall ſticks three feet long is a better way than tying them, as it prevents their falling to the ground; and the workmen can eaſier clean the hills, during the ſummer.

The next March, you ſhould open the earth round the ſets, and with a ſharp knife cut away the dead tops, and ſuckers ſpringing from the ſets;—cover them

again with ſome of the compoſt;—dung alone when freſh is a poiſon to them.—In April you will find the young ſhoots appear, then begin to pole them; two poles are ſufficient this year to each hill. Fix the (*b*) poles deep, having made holes for them with an iron bar. Poles of eight feet long will be high enough this year;——over-poling at all times draws the vine too much and weakens it. High winds often blow down the poles, and ſcatter the ſeed.—To prevent which I beg leave to recommend the experiment of horizontal poling, fixing the poles on ſhort ſtout forked ſtakes, train the vine round theſe;——perhaps this method might not only ſecure them from winds, but alſo from blights; becauſe the vapours would riſe above theſe eſpalier-hops, which would be too heavy to mount eighteen or twenty feet, and ſo carried away with the adjacent air.

Any ſhort poles might do for this purpoſe, and there might be a gradation of

(*b*) Guide the vines as they grow round the poles with ruſhes or thread.

them,

them, fixed one above another to the height of ſeven or eight feet. If any inſects appeared on the plants, they may be waſhed off with a garden pot full of water, and a roſe to it. This may be eaſily tried at a leſs expence than the uſual method of long poling.

As it is generally agreed that thoſe vines thrive beſt, whoſe roots are ſhaded from intenſe heat, I preſume it would not be amiſs, if the whole plantation was covered with fern or ſtraw in hot dry weather.

I think covering the hills in winter with dung, litter, or ſuch like, is a wrong method, as they retain the wet too long at this time of the year and rot the plants; as I have known large plantations of Artichokes intirely rotted by ſuch covering:——the beſt way is to cover them with earth and coal aſhes.

Picking or Gathering.

The manner of picking or pulling hops, is ſufficiently treated by an ingenious writer in the firſt number of the Muſ.

Ruſticum, to which I refer the reader.—I muſt here beg leave to obſerve one thing recommended in a marginal note of the above number—which is propoſing a premium to that bin or company, which ſhall gather the greateſt quantity in a given time. Doubtleſs the gentleman who recommended this muſt mean well: and ſhews a generous principle in diſpoſing præmia, which in moſt things have the deſired effect. In this, I preſume, it would not. By this bounty, the pickers might go on ſo expeditiouſly, as greatly to injure the planter, in pulling leaves and ſprigs with the hops.—It is the intereſt of the picker, without the premium, to make all the expedition he fairly can, as he gathers by the buſhel or certain meaſure.

The director of this tumultuous army, has enough to do, to ſee that each picker gathers the hops clean, and free from ſprigs, &c. in a large plantation, even as the manner of picking now is; it would be impracticable for him, if this work

was hurried on in hopes of an additional reward.

I humbly think that where there are more plantations than one, the beſt way would be to plant different ſpecies of hops; ſome earlier, others of a later kind; by this means the pickers may find ſucceſſive employment.

I do not recommend different kinds in the ſame plantation, becauſe the wind would blow the farina, or male duſt, promiſcuouſly, and create a mixed ſpecies, and thereby fruſtrate the intention of the planter.

Drying.

This may be done on common kilns, or oaſts, as they are called in hop counties: either floor'd with lath and hair cloth, or plates of tin.—Drying is a critical operation, and requires experience (*c*) rather than written inſtructions.—Where a large plantation is intended, I would

(*c*) Minus valent præcepta, quam experientia. *Quint.*

adviſe

adviſe the getting a perſon from the hop country, who underſtands the whole management, and capable of teaching others.

Where the plantation is ſmall, perhaps the following method may be the ſafeſt and the cheapeſt.

Nail tin plates on a ſlight frame of deal, or any other ſlips. Fix this within your cucumber frames on ledges nailed near the bottom; then lay the hops on the tin plates, cover them with your cucumber glaſſes. The heat of the ſun through the glaſſes, and the reflexion of the tin, will ſweetly and effectually dry them. Give them air, and if any moiſture appears on the inſide of the glaſſes, turn them upſide down. Almoſt every gentleman has ſuch conveniences; and at this time of the year his frames and glaſſes are not wanted for garden uſes.——Theſe frames may ſerve alſo to dry ſmutty wheat after being waſhed; to ripen ſuch ſeeds as muſt be cut before they are ripe, to preſerve them from birds——and for many other purpoſes. The farmer inſtead of glaſſes may have whited-brown paper, paſted together and ſtretched on the

the ſlip-frames, then oiled over on one ſide with a bruſh. Theſe paper frames will admit the ſun's rays thro' them ſufficiently to dry the hops.

Let your hops lie ſome time before you bag them.

Page 16. No. 1. Vol. 1. Muſeum Ruſticum, gives an account of a few plants which thrive near the ſea. I ſhall here add a few more; ſome of great ſervice ſo near the ſea where ſcarce any tree arrives to that ſize as to produce ſhade or ſhelter.

The ſpray or ſalt vapours carried by the winds from the ſea, and falling on trees, are very prejudicial to their growth, and ſhave, as it were, that part neareſt the ocean.

The moſt remarkable and uſeful plants and trees that reſiſt, or rather like, the ſea air.

PLANTS.

The Limonium or Sea Lavender—— the Eringo (*e*) or Sea Holly.—Sea Spurge.

(*e*) This is reckoned pectoral and ſtrengthening.

(*f*)

(*f*) Samphire.——(*g*) Yellow Poppy, or Papaver luteum corniculatum.—(*h*) Mulva arborea——Althea or Marſh Mallow.

Trees and Shrubs.

Oranges, lemons, citrons, myrtles, are fond of this air—Vines—Fir—White-

(*f*) Samphire is an agreeable healthy pickle; a ſtrong antiſcorbutic, aperient and diuretic.

(*g*) There is an extraordinary account of the effects of this plant in the Philoſophical Tranſactions. A poor woman ſent her children to the ſea ſhore to gather Eringo roots to make pies with; inſtead of which they brought home the roots of the Yellow Poppy; which were made into pies. The huſband, wife and children eat heartily of them; the man ſoon after going to his labour found no great injury;—the mother and her children were extremely ill, voiding up and down; and, what is moſt ſtrange, imagined the contents, and every thing they ſaw, to be gold.—They all recovered without any medicine, the effects going off.

(*h*) Mallows are emollient;—the root of great ſervice in nephritic and calculous complaints, in lubricating the veſſels.—It is alſo of ſervice in defluxions upon the lungs, in hoarſeneſs, &c.

The Daucus Silveſtris, or Wild Carrot, is excellent in this diſorder, a tea made of the ſeed and drank frequently.

Thorn

Thorn——the Maple——the Acer Majus or Sycamore.

Let the planter remember that all plantations near the ſea, ſhould be thick, becauſe this makes them ſpire, and alſo ſhelter each other. That ſide next the ſea ſhould be planted with Fir or Sycamore, as beſt agreeing with this air. If this be obſerved, I preſume moſt of the foreſt kind would thrive very well. To corroberate this preſumption, I ſhall beg leave to mention one plantation at Margam in Glamorganſhire *. There is a grove of Oak, Elm, Aſh, and Sycamore planted thick, which is in as thriving a condition as any more remote from the ſea. Some of the oak meaſure near two ton. Near this grove, on the other ſide the great road, ſtood a ſtately row of ſycamore. There is a bed-chamber in Margam houſe floored with this wood; as beautiful as any whatever, and I believe as durable as deal to the full, rendered ſo by the following method. The boards

* There is the fineſt Orangerie in England at Margam.

ſo ſoon as ſawn were laid in a pit filled with quick lime and water, and left there for ſome time, till they were ſo ſaturated that all the pores were cloſed.——When plained and laid on the floor, they were as yellow as mahogony.——This wood has been always deemed good for (*i*) little, except the turner's uſe. This may be a valuable piece of knowledge to thoſe who live near the ſea. This tree is of very quick growth, and may be eaſily and abundantly propagated from the keys or ſeed. I think the beſt way is to ſow the ſeed where they are to remain.

Number 6. of the Muſeum Ruſticum, contains a very ſenſible and valuable letter, from the Reverend Mr. Jackſon, (*k*)

(*i*) ———Nuper vile fuiſtis acer. OVID.

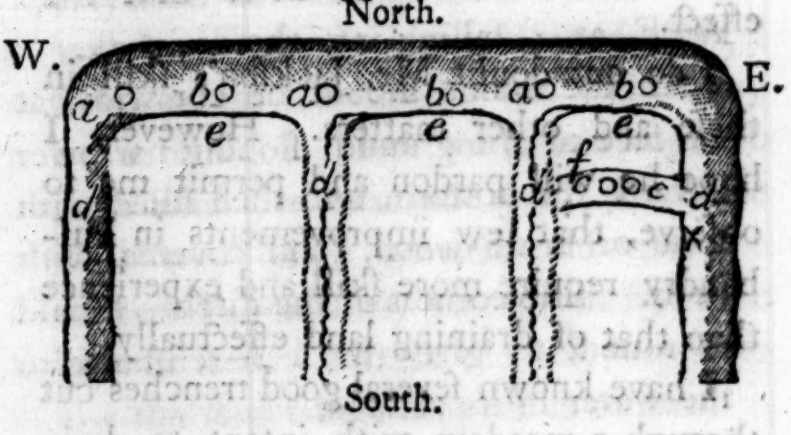
(*k*) I am glad to ſee ſo many letters in the Muſeum Ruſticum from the clergy; indiſputably they are as capable to try experiments, and give as pleaſing inſtructions in huſbandry, as any men whatever. I wiſh there was a glebe for every one of that ſacred profeſſion; I preſume moſt of them would chuſe it rather than tithes, as leſs liable to diſputes, and I think it would be more advantageous to the public,

on his management of a ruſhy, ſour meadow. He drained it in the uſual method, by cutting deep trenches; — he ſpread great quantities of coal aſhes all over it. But this, as he ſays, had not the deſired effect.

I do not doubt Mr. Jackſon's ſkill in theſe and other matters. However, I hope he will pardon and permit me to obſerve, that few improvements in huſbandry require more ſkill and experience than that of draining land effectually.

I have known ſeveral good trenches cut through a meadow with intent to drain it, but to little purpoſe. Cutting drains in parallel lines in the ſame direction as the ſprings or wet tend to, will not anſwer. The firſt and moſt material thing required is, to make a tranſverſe ditch through the very head of the ſprings, and ſo deep till you get below their ſource. From this ditch cut others at a proper diſtance in a contrary direction. The water will flow from the firſt ditch into theſe, and is thus carried off to the loweſt part of the ground.

As this is a circumſtantial article in the improvement of lands, I ſhall endeavour to make what I have ſaid more clear to the reader by the plate annexed.



aaa, *bbb*, are ſprings which naturally tend towards the ſouth, and render the land moiſt, and ſometimes wet, all the way to S.

From weſt to eaſt a capital ditch is cut, *through* the ſprings, and *below* them; by which means the water flows into the parallel drains *dddd*.

If there was no capital ditch from W. to E. but only the parallel drains, the land would ſtill continue wet, owing to the

the oozing of the ſprings between the drains *dddd* at *eee*.

If there ſhould be any ſprings below the capital trench W. E. as at *cc*, ſuch another cut muſt be made as that from W. E. at *f*, falling into the drain *d*×.

All the drains ſhould be cut wider at the face of the ground, ſloping narrower towards the bottom, and then filled with ſtone or bruſh-wood, and covered with earth. The corners of the ditches ſhould be round, to give the leaſt reſiſtance to the water in its paſſage.

Mr. Jackſon purſued a very good method, in digging his meadow, and planting it with cabbages.

Cabbages are very good food for any ſtock, except ſuch cows as give milk for man's uſe, as they give a diſagreeable taſte to the milk, butter, and cheeſe. Ventilators (*l*), in the hands of Mr. Jackſon,

(*l*) Ventilators are of great ſervice to the farmer in ſeveral inſtances, and of ſuch ſimple conſtruction, that I wonder they are not in general uſed. The inventor (Dr. Hales) was one of the moſt uſeful divines this kingdom ever had.

might

might effectually purify the milk; but few gentlemen, fewer farmers, will attempt this, thinking it too much trouble, and perhaps too great an expence.

I am ſurpriſed to find Mr. Jackſon's pork proved ſo good when fed on cabbages and barley-meal only; I ſhould think both a flabby food. Perhaps the pickle might be of ſervice, and render it ſo. I preſume bacon, thus fed, can have no great ſolidity, but muſt waſte conſiderably in the boiling.—I have fatted pork on turneps and potatoes, but I always gave them peaſe or oat-meal at laſt to render the meat ſolid. No pork could be ſweeter or better. Be it as it will, pork fed on cabbages muſt be delicious meat, in compariſon to that fed on garbage, &c. in great towns.

That I may not delay ſo long as a whole year, and the benefit of a whole ſeaſon loſt, I ſhall here inſert part of that I intended for a future paper.

The CULTURE *of* WINTER CABBAGES.

There is no doubt but a great quantity of dung and good digging is the ſureſt way

way of getting great crops of cabbage. But when we treat on extenſive plans in farming, we muſt uſe the moſt ſimple and leaſt expenſive methods. This ſhall be my aim at all times.

Sow immediately (in April) (*m*) in a good ſpot (*n*), a quantity of ſavoy and common white cabbage-ſeed. — When they have eight leaves, prick them out on another good ſpot. If the weather and ground ſhould be dry, the trouble and expence of watering, till they ſtrike root, will be a trifle.—This pricking out will give them ſtrength, make them ſhort-ſhanked, and prevent their running to ſeed.

(*m*) This was to have been publiſhed in April. However, it is not yet too late to ſow cabbage-ſeed.

(*n*) I muſt obſerve, once for all, that I have always found it neceſſary, in the raiſing of any plant, that the nurſery ſhould be kind and rich; for unleſs plants have their kindly growth at firſt, they will remain for ever after weak and ſtinted.—It is ſo with the animal creation: if a calf, colt, &c. be ſtinted the firſt year in its keep, the utmoſt care and expence will never give it either ſhape or ſtrength afterwards.

The

The earlier (the latter end of May or beginning of June) you tranſplant theſe cabbages, the ſooner they will turn, and not fail to produce a good crop. Therefore, if you have peaſe or beans ſet in the drill way in your fields, plant them (if you can in moiſt weather) between the rows, and you need not fear of a return anſwerable to your reaſonable deſire, if the ground is in heart, and your ſeed good. If you have no ſuch drill crop growing, let your plants remain in the ſecond bed till you get your firſt crop off the ground, be it peaſe, wheat, or any other;—then plow up the ſtubble, deep as it will bear, harrow well, plant your cabbages at ſix feet a-part. If your land is poor, give it dung, or any other manure, before you plow it; keep your plants hoed, or rather dig round them. This laſt method of planting will be time enough to produce, perhaps turned cabbages, if not, a fine feed for ewes and lambs in the ſpring. There is a double advantage in planting between rows of

pulſe,

pulſe (*o*), as they will be in a great meaſure ſhaded till they take root, and be earlier in growth.

When you make uſe of your turned cabbage, do not pull them up by the root; cut the heads off, as the ſtalk, when left, will produce a great number of ſhoots, which will be good feed for your cattle in the ſpring, when fodder is moſt ſcarce.

You will by this method obtain an extra-crop at a ſmall expence, and prepare your ground for a ſucceeding one. A few acres of well-turned cabbages will maintain a great number of cattle, ſheep, hogs, &c. The expence is a trifle. They are very good food for ſtore-cattle, and will bring any beaſt forward in fleſh;—are excellent for milk-cows which give ſuck.—But for the finiſhing part of fattening, carrots,

(*o*) I obſerved this week, that peaſe and beans, all the way from Burford Downs through Oxfordſhire and Berkſhire, are ſet too near in the rows, being little more than a foot diſtance. Were they planted five or ſix feet a-part, they might be hoed with a plough, and the intervals planted with cabbages or turneps.

parſneps, potatoes, and turneps, are much preferable.

Laſt month (March) I ſowed three acres with carrots and parſneps in drills nine feet diſtance; in another ſpot I ſowed two pounds of ſavoy and common white cabbage-ſeed, to plant the intervals with. To make the moſt of the ground, I have ſown the early Dutch turnep between the rows of carrots and parſneps, which, I hope, will be fit for market, before the cabbage plants require tranſplanting for good.—I hope the carrots and parſneps will produce a crop at leaſt equal to three tons of hay. I expect the early turnep will pay the rent of the ground, and the cabbages be no deſpicable crop.—I have been yet at no expence in manure. Indeed my land, on which theſe grow, might not tempt many to try the experiment. The beſt I can ſay of it is, that it was a fine tilth, having had a crop of poor turneps laſt year; it is a very ſidelong field, and full of ſmall ſtones—not a ſhallow ſoil—not a rich one. However, I was not diſcouraged; I intended it for

barley.

barley. Bad as it was, I thought it might produce a better return, eſpecially as winter fodder is ſcarce with me.—I ſhall have the pleaſure of the trial, and, perhaps, the public the reſult of it.

Number XI. Muſeum Ruſticum, conſiſts of *leading queſtions*,—moſt of them very ſerviceable, if properly anſwered.—Not one has been yet taken notice of, that I can find.

I may hereafter treat on ſome of them: I ſhall now ſay ſomething to the firſt.

Of WASTE *and* UNCULTIVATED LANDS.

As to the quantity in *all* England, it is too difficult a taſk for me to aſcertain. I think two or three gentlemen in each county may, without any great difficulty, point out their reſpective quota.

I ſhall begin with *that* in the vicinity of London.—Bagſhot Heath is the moſt dreary, fruitleſs wild, I ever ſaw. There are ſome thouſand acres in this neighbourhood, which do not produce corn, paſture, nor wood. There is no doubt, but by proper management they might all

theſe. It is no great credit to this flouriſhing nation that there ſhould be ſuch a deſart ſo near the fineſt city in Europe, and in a land of huſbandmen. Being ſo near the metropolis, ought to be great encouragement to improve it.—Who is to encourage it? who to undertake it?—A gentleman, who is looked on as of great abilities in agriculture, took the liberty to propoſe it to a nobleman of great underſtanding, then in power; but, through multiplicity of buſineſs, or ſome other impediment, it ſtood neglected. The ſame gentleman would yet undertake it, if properly encouraged: ſurely it deſerves it. His ſcheme is truly worthy of notice.—As to Hounſlow Heath, it would make a noble farm.

There is not a mountain in all South Wales, that I have not ſome knowledge off. The ſoil, in general, is better than that of Bagſhot Heath. Theſe hills are higher and colder, and a great way from market. Yet even theſe, are capable of ample improvement. They have ſeveral extenſive plains between their ſummits, which might be incloſed with ſtone, (for

there is plenty) and converted to arable and paſture; and the verge planted with Fir and other trees.

The ſummit of the hills crowned with Firs, which would be refreſhing (*m*) ſhade (*) in ſummer, and a comfortable ſhelter in winter for ſheep and cattle. When ſnow lies deep on other parts of the mountain, theſe ever-green plantations would be clear of it, for I never ſaw ſnow lie indiſſolved under the Fir-tree. Some of theſe hills (*n*) extend eight, ten, ſome twenty miles. Upon theſe hills are fine (*o*) ſprings, which might be collected, and diverted over the paſtures, which is no ſmall encouragement to ſet about this extenſive improvement.

(*m*) Solſtitium pecori defendite.

(*) Sir Edward Williams of Langoyd Caſtle in Breconſhire, has immenſe tracts of hills in that county, and for ſome years paſt he has planted part of theſe mountains with Firs, which thrive amazingly. I think he planted ſixty thouſand every year.

(*n*) Continui montes, niſi diſſociantur opaca
Valle ——— ———

(*o*) Hic gelidi fontes,

Here

Here is manure of various ſorts, on the ſpot; inexhauſtible ſupplies of peat (*p*) or turf aſhes. In many places lime-ſtone, and coal to burn it. Unctuous earths, and folding of the flock.

Here may grow wheat, rye, barley, peaſe, vetches, turneps, cabbages, carrots, parſneps, potatoes, flax, clover, rye-graſs, trefoil, St. Foyne, Lucern, and perhaps the favourite Burnet and Timothy-graſs, &c.

Theſe barren, bleak, fruitleſs, dreary waſtes, may be rendered warm, pleaſant, fruitful and populous——at the expence of a little money, ſpirit and judgment. This would be an amuſement, not only more healthy, but infinitely more ratio nal and profitable, than ſquandering away immenſe ſums in the whirling round of thoughtleſs diſſipation.——He only is the man of true pleaſure, who ſpends his fortune in doing good, in giving employment to the induſtrious; not he who

(*p*) The Welch call this Mawn: the aſhes are an excellent manure, and ſell at a great price about Newberry in Berkſhire.

throws

throws it away on worthleſs objects. Happy the man, who can, and will give employment of this ſort to the poor; and who receives from them laſting joys and profits in return.

To improve wild and waſte lands, is making long and happy ſtrides towards a loſt paradiſe: and by God's permiſſion, leaving the curſe of ſterility behind us, to the ſlothful and perverſe. This would ſo far change the face of wild nature, that our poſterity may in raptures ſing with the poet.

Not thus the land appear'd in ages paſt,
A dreary deſart, and a gloomy waſte;
Now in full light, the ruſſet plains extend,
There wrapt in clouds, the groves of Firs aſcend:
E'en the gay St. Foyn ſpreads its crimſon dyes;
And 'midſt the deſart, fruitful fields ariſe.

POPE'S *Windſor Foreſt.*

As this is the ſeaſon for turning cattle into clover, it may not be improper to add

add ſomething already ſaid on that ſubject in the Muſeum Ruſticum.

It is well known that thoſe cattle are moſt apt to ſwell in clover, which are leaſt accuſtomed to ſuch feed. It is wiſer to prevent a diſeaſe, than to run after a remedy.——Therefore it may be well worth while to conſider, that wet, hunger, heat and rank clover occaſion ſwelling.

Cattle ſhould not be turned in faſting, nor continue long, eſpecially at firſt.—— give them dry fodder before you turn them in, and when you turn them out, let them range over large paſtures, or kept in the fold on hay.—Never turn them in at night, nor in wet weather, nor in the very heat of the day.——Keep them from water. Theſe means will, generally, preſerve them. If they ſhould ſwell, let a ſmall hand rake them behind, and take away the excrement, and give vent to the air within.—Stabbing is the dernier reſort, and often worſe than the diſeaſe. However it is ſometimes neceſſary

It is a ſafe way to ſow trefoil and rye-graſs with your clover. I never ſaw a beaſt

beaſt hove or ſwell in this mixed herbage. And this feed is better in every reſpect than clover alone, either for hay or paſture. If you muſt ſow clover alone for the ſake of ſeed, feed it with horſes only.

When cattle are turned out to graſs, they are wanton, reſtleſs, and often gore and hurt each other, which is the occaſion of many accidents, eſpecially ſtaling blood, owing to the bruiſes they receive; the blood in the emulgents becomes congeſted, and nature endeavouring to throw off by the urinary paſſage, the poor creature ſtales bloody.—The farrier or cow doctor is ſent for, to pour in abundance of abſurd and coſtly medicines;—the cure in this caſe is very ſimple—a little freſh hog's dung, diſſolved in warm milk, given with a horn. Aſtringents are often fatal, by cauſing inflamations. The knowledge and cure of diſeaſes is of great ſervice to the farmer.——Theſe ſhall be treated occaſionally in future papers.

The improvements * in huſbandry, within the ſhort ſpace of three or four years, are amazing. Even ſo remote as Burford Downs, which uſed to have but an indifferent aſpect; but now flouriſh with the very pleaſing promiſes of a fruitful harveſt.——They begin to incloſe thoſe open and cold downs, which will ſoon bring them to a face equally delightful and profitable to any part of the kingdom of the like ſituation. I muſt, however, ſay that their method of incloſing is not the beſt. I preſume a much more agreeable as well as profitable way may be pointed out.

They make their fences with ſtone walls, which in this open country look cold, naked and diſagreeable. I own they are good fences; but afford neither beauty or profit. Whereas a quick-ſet fence would appear beautiful, and produce a conſiderable profit. Here and there you may ſee a fence of this ſort, but it conſiſts of one ſingle row of quick.

* This is owing, in great meaſure, to thoſe uſeful tracts, lately publiſhed on Agriculture.

If

If they made their banks wide enough to plant three or four rows of ſets, they might have a beautiful, impregnable fence; and might cut one or more rows in ſucceſſion, leaving the others to ſtand for fence and ſhelter, till thoſe which were cut are grown high enough for a fence.

This method would afford a great quantity of fire wood, which is a very conſiderable article in thoſe parts. Fire being as dear and as neceſſary here-about as in any place I know. At every twenty feet might be planted Elm, Beach, &c. which would add to the beauty and the profit; and would alſo be a great ſhelter to the ſheep, &c. in this high and bleak ſituation.—If the ſides of the banks were faced with a dry wall about four feet high, it would add to the neatneſs and ſecurity of the fence, by preventing the earth's falling down into the ditch; and the ground regularly made ſloping to the very foot of the wall, both on the road and the field ſide. Drains may be made in the banks, to let the land-floods through into the ditch on the incloſure

ſide, and conveyed over the paſture grounds below, which rain-floods bringing the ſullage of the road with them, would not only render the grounds moiſt, and forward the growth of the graſs, but be alſo an excellent manure, without the expence of money or carriage, and in time add to the depth of this ſhallow ſoil.

I am extremely ſorry that the cambrick manufacture, lately ſet up at Winchelſea, ſhould conclude theſe few obſervations. The public papers tell us that the implements belonging thereto are to be ſold. What can give greater concern to a perſon who has his country's good at heart, than to find any uſeful manufacture decay, or be diſcouraged. How far this may be ſo, I am an utter ſtranger to; but certainly we all know that a manufacture, (eſpecially in the loom way) which gives employment to a great number of the induſtrious poor, is one of the moſt valuable acquiſitions a neighbourhood can be bleſſed with. Therefore it is the indiſpenſible duty, and *intereſt*, of every individual to promote and eſtabliſh it.

" May every work of public utility be ſet on foot; manufactures eſtabliſhed; arts and agriculture improved; commerce extended; and every public *virtue* diſpenſe all its bleſſings" over every part of this happy nation.

THE END.

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